JOINT EXPLANATORY STATEMENT OF THE COMMITTEE OF CONFERENCE

The managers on the part of the House and the Senate at the conference on the disagreeing votes of the two Houses on the amendment of the House to the bill (S. 1281) to authorize appropriations for the National Aeronautics and Space Administration for science, aeronautics, exploration, exploration capabilities, and the Inspector General, and for other purposes, for fiscal years 2006, 2007, 2008, 2009, and 2010, submit the following joint statement to the House and the Senate in explanation of the effect of the action agreed upon by the managers and recommended in the accompanying conference report:

The House amendment struck all of the Senate bill after the enacting clause and inserted a substitute text.

The Senate recedes from its disagreement to the amendment of the House with an amendment that is a substitute for the Senate bill and the House amendment. The differences between the Senate bill, and the House amendment, and the substitute agreed to in conference are noted below, except for clerical corrections, conforming changes made necessary by agreements reached by the conferees, and minor drafting and clerical changes.

This legislation authorizes the appropriations of funds for the National Aeronautics and Space Administration (NASA), for the fiscal years 2007 and 2008. In addition, it sets forth a framework of policy guidance, program management authorities and requirements, and means for ensuring accountability in program management and oversight.

U.S. CIVIL SPACE GOALS/VISION FOR SPACE EXPLORATION

The conferees endorse the President's Vision for Space Exploration and outline the rationale for it in section 101(b) of the Conference Report. The conferees believe that the Conference Report provides a strong legislative foundation for the pursuit of the nation's continued exploration of space in a manner that both preserves the important legacy of accomplishments in science, aeronautics and human space flight and provides NASA with the authority to move its new program of exploration forward.

SCIENCE

In an increasingly technological age, scientific and technical excellence is fundamental to securing the nation's economic and security interests and to inspiring and educating the next generation of scientists, engineers, astronauts, and entrepreneurs. The conferees agree that a continued strong and diverse array of programs in the areas of space science, earth science and education is essential, and the Conference Report combines important elements of the Senate- and House-passed legislation in order to ensure that such activities

continue to represent a major portion of NASA's programs and priorities and that such activities are judged on their own merits.

HUMAN SPACE FLIGHT AND SPACE TRANSPORTATION

The conferees agree that it is important for the United States to have continuing, safe and reliable human access to space. The conferees further acknowledge the need to provide the smoothest possible transition between the eventual retirement of the space shuttle and the development of the new Crew Exploration Vehicle (CEV) and Crew Launch Vehicle (CLV). Section 502 of the Conference Report lays out an approach for an effective transition. At the same time, the Conference Report provides important oversight guidance, in terms of planning, funding projections and accountability, designed to ensure the success of these new systems' development.

The conferees also recognize the importance of the International Space Station (ISS) in sections 505 and 506 of the Conference Report. The conferees recognize the research potential of the ISS beyond its contribution to long-duration human spaceflight in support of the Vision for Space Exploration in several sections, including section 305. The conferees adopt language that requires a minimum percentage of ISS research to be directed toward a range of science disciplines not directly related to supporting the Vision for Space Exploration. Furthermore, the conferees agree to provisions based on the Senate-passed bill that designate the U.S. segment of the ISS as a National Laboratory, paving the way for the addition of non-NASA resources and non-Government resources to support space station-based research.

AERONAUTICS POLICY

The conferees agree to provisions included in both Senate- and House-passed bills that require the development of a national aeronautics research policy to guide future investments in this important segment of NASA's mission. A healthy and vibrant aeronautics research capability and aerospace industry are vital to the nation's economic security. The plans and priorities required and highlighted by the Conference Report should serve to ensure the vitality of aeronautics research within the framework of a clear set of national policy objectives to be developed under the provisions of the Conference Report.

ADDITIONAL SIGNIFICANT PROVISIONS

In addition to the major policy areas noted above, the conferees agree to a number of significant provisions contained in both the House- and Senate-passed bills. Among these are provisions for workforce management, the encouragement and authorization of significant commercial participation in a full range of science, aeronautics, and exploration activities, enhanced program fiscal and management accountability, and significant measures providing for independent oversight of NASA programs and management. A number of these provisions are further described in the balance of the explanatory statement.

EXPLANATION OF SELECTED PROVISIONS

Sec. 101(d). Science

Section 101(d) directs the Administrator to develop a plan to guide the space science and earth science programs of NASA through 2016. The priority ranking required by this subsection is a single ranking of all the missions that NASA lists pursuant to paragraph (2)(A), not a ranking categorized by theme or any other category.

The conferees understand that NASA will have to update and revise the plans and priorities periodically. The conferees do not intend that NASA be bound by this plan until 2016. But the plan should be based on the best possible current assessment of what NASA will be able to do between now and 2016.

The conferees are aware that the National Academy of Sciences is continuing to work on an Earth Science and Applications from Space Decadal Survey which is due to be completed in 2006. In preparing the science plan, NASA should, to the greatest extent possible, take into consideration information available from the Decadal Survey. The conferees expect NASA to notify the authorizing committees if the completed Decadal Survey would change any of the information provided in the science plan.

Sec. 101(e). Facilities

Section 101(e) directs the Administrator to develop a facilities plan through fiscal year 2015. While the facilities plan does not have to be transmitted to the Committees until the date on which the President submits the fiscal year 2008 budget to the Congress, the conferees urge NASA to provide notification to the authorizing committees prior mothballing or closing any significant facilities before the transmittal of the facilities plan.

The budget assumptions used to develop the facilities plan and descriptions of the costs and the type of work that are planned to maintain, modify or upgrade each facility, must be described in the plan.

Sec. 101(h). Budgets

The conferees support the views expressed in the House report that accompanied H.R. 3070 (House Report 109–173) and in the Senate Report that accompanied S.1281 (Senate Report 109–108) regarding the lack of detail provided by NASA in the fiscal year 2006 budget justification and previous inconsistency in identifying major program budget requests. As required by subparagraph 101(h)(1)(A) NASA is to provide proposed budgets for each of the areas (i) through (ix) "by program". For the purposes of this section a program is a major activity proposed in the budget that is contained within each of the categories (i) through (ix). For example, programs within the budget for Space Operations would include the Space Shuttle and the International Space Station. However, nothing in this section should be construed as allowing NASA to provide less detail than was contained in the fiscal year 2006 budget justification.

Sec. 101(j). Aeronautics Test Facilities and Simulators

The aeronautics simulators to be reviewed under section 101(j) include at least the following:

- Research Aircraft Simulation Facility at the Dryden Flight Research Center
- Cockpit Motion Facility at the Langley Research Center
- Differential Maneuvering Simulator at the Langley Research Center
- Visual Motion Simulator at the Langley Research Center
- Vertical Motion Simulator at the Ames Research Center
- Crew Vehicle Systems Research Facility at the Ames Research Center
- Future Flight Central at the Ames Research Center
- Virtual Airspace Simulation Tool at the Ames Research Center
- Arc Jet facilities at the Ames Research Center.

Sec. 102(b). Budget Information

Congress needs to understand fully the implications of building the CEV before NASA commits to this major project. This is a recognition of how central CEV development will be to NASA's activities and budget in the coming years and the need to ensure that adequate resources likely will be available for this development.

For that reason, absolutely no later than April 1, 2006, NASA must report the expected development cost to the authorizing committees. This is not a transmittal of the development contract itself or a detailed description of a yet-to-be-signed contract. What the committees are seeking is a realistic estimate for the total cost of the program that includes contract costs, government costs, and reserves.

Along with the estimate of expected costs, the Conference Report requires NASA to calculate two other cost estimates for the CEV based on historic experience with cost growth in relevant programs. NASA should consult the September 2004 Congressional Budget Office report, *A Budgetary Analysis of NASA's New Vision for Space Exploration,* in developing the cost estimates.

The Conference Report then requires NASA to prepare new 'sand charts' covering the period through 2020 that show the expected figures for NASA's primary program areas using each of the CEV cost estimates required by this subsection. All three sand charts should assume inflationary growth for NASA's total funding throughout the period.

Sec. 102(e). Office of Science and Technology Policy

The study required by section 102(e) is designed to provide Congress with additional information in reviewing NASA's programs. Therefore, in carrying out the study, the Office of Science and Technology Policy should give deference to Congressional directives, and should assume that any program mandated by Congress is intended to be carried out as authorized. Also, the study should not be used to make any changes in program directions, funding or locations without further consultation with the Congress.

Sec. 103. Baselines and Cost Controls

The conferees support the views expressed in the House report that accompanied H.R. 3070 (House Report 109–173) on Baselines and Cost Controls. The conferees have amended the House language to consolidate the reports into a single document to be provided at the time of the President's annual budget submission and have raised the threshold for the definition of a major program to $250 million. The conferees do not want NASA to lump separate development programs together into a single program for reporting purposes under this provision. For example, NASA may not aggregate the various programs and projects for the mission to return humans to the Moon as a single program. The conferees expect that the CEV, CLV, and other elements of the initiative will be reported as separate activities with their own baselines and annual updates. The conferees also expect the same treatment be provided in reporting major program activities within the Science, Aeronautics, and Education budget account.

For programs in the development phase at the time this Conference Report is enacted, reports shall reflect the current baseline for cost, schedule and technical content, not the baseline that may have existed at the time the program was approved to proceed to the development phase.

Sec. 104. Prize Authority

The Conference Report is silent on how intellectual property should be handled as part of the prize program in section 104. NASA should announce the intellectual property policy for each prize in the notice required by subsection (d). The policy should be designed to ensure that the government gets the greatest benefit possible from the prize program, meaning that it should enable the prize program to attract as many contestants as possible and that it should enable the government to make use of any winning ideas. In developing the policy, NASA should review the advantages and disadvantages of all options including having all intellectual property reside with the contestants and the option of requiring the prize winner to give NASA a royalty-free license as a condition of receiving prize money. If NASA informs Congress of the intent to award a very large prize under subsection (i)(4), the written notice should include a description of how NASA will handle intellectual property in the contest.

Sec. 105. Foreign Launch Vehicles

This section should not be construed to prevent a consolidated approval of the planned ISS logistical and utilization flights; that is, the section does not require that each planned launch to the ISS trigger a separate interagency review. Additionally, this section is intended to support Presidential policy and timely notification, not inhibit the use of foreign launch vehicles where the Agency feels it helps to meet program goals.

Sec. 110. Whistleblower Protection

Given that concerns have been expressed about the reporting systems available within NASA and the potential for retaliation against whistleblowers, the conferees want to ensure that NASA

develops and implements a plan, consistent with existing law, that provides for the protection of the rights of its employees and prevents retaliation against its employees who raise concerns (1) about substantial and specific dangers to public health or safety or (2) about substantial and specific factors that could threaten the success of a mission. The conferees intend for the phrase "public health or safety" to include matters that would affect the health or safety of NASA employees, but not the larger public.

Sec. 201. Budget Structure

Section 201 establishes a budgetary structure for NASA for fiscal year 2007 and thereafter that consists of the following three appropriation accounts: "Science, Aeronautics, and Education", "Exploration Systems and Space Operations", and "Inspector General".

The Science, Aeronautics, and Education appropriation account shall include all of the programs in the current Science (including both space science and earth science), Aeronautics, and Education lines proposed in the fiscal year 2006 request, except that the Robotic Lunar Exploration Program shall be transferred to the Exploration Systems and Space Operations appropriation account, as NASA has proposed.

The Exploration Systems and Space Operations appropriation account shall include all programs currently in the Exploration Systems and the Space Operations budgets in the fiscal year 2006 budget request. In addition, the ISS Crew and Cargo Services and the Robotic Lunar Exploration Program shall be included in the Exploration Systems budget, as NASA has proposed. The Space Operations budget shall include the International Space Station and Space Shuttle programs and the Space and Flight Support line.

The conferees encourage synergy between the Exploration and Space Operations programs to take advantage of common resources and capabilities, when appropriate. Taking advantage of such synergies between the programs should not require the reprogramming of funds because such synergies would merely require charging work related to exploration to the exploration budget and charging work related to space operations to the space operations budget.

The conferees have included additional funding above the request for the Space Shuttle program in the Space Operations budget to address funding shortfalls in previous projections for Space Shuttle funding.

While the conferees did not include authorization levels for fiscal year 2009, the conferees believe that NASA should continue to receive in fiscal year 2009 funding sufficient to allow it to pursue robust science, aeronautics and human space flight programs, including sufficient funding to enable the Space Shuttle to operate safely, to complete the assembly of the International Space Station, and to ensure a smooth transition to the CEV and CLV programs. The conferees note that the fiscal year 2006 Budget Request outyear projections did not adequately address Space Shuttle requirements.

The conferees understand that NASA may not be able to adapt its internal accounting systems to the new appropriation account structure before submitting its fiscal year 2007 budget request.

NASA should adapt its systems to the new appropriation accounts as swiftly as possible. NASA must have completed the transition by the start of fiscal year 2007. The conferees expect that the Authorizing Committees will work with the Appropriations Committees to ensure that NASA has clear and uniform guidance from the Congress on which to base its transition.

The conferees have granted limited transfer authority to NASA so that it will have the wherewithal to address the immediate costs to the agency of major disasters, acts of terrorism, or emergency rescues of astronauts. It is intended that such transfer authority be used sparingly, and that the affected accounts be restored to the maximum extent practicable by subsequent supplementary funding. The conferees wish to emphasize that the provision of such transfer authority should not be construed as obviating the need to have supplementary funding provided to the agency once the immediate crisis has passed.

The conferees expect that if any funds authorized by this Act are subject to a reprogramming action (within an account) that requires notice to be provided to the Appropriations Committees of the House of Representatives and the Senate, notice of such action shall concurrently be provided to the Committee on Science of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate.

In addition, the conferees wish to discourage reprogramming actions that would further reduce the funding available to those programs for which the amount appropriated is less than the amount authorized in this Act. At a minimum, the conferees expect that notice will be provided to the Committee on Science of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate that contains a full and complete statement of the proposed action, its rationale, and the expected impact of such an action.

In view of the importance of fundamental research both to the education of the next generation of scientists and engineers as well as to the advancement of knowledge, the conferees urge the Administrator, when reprogramming funds to cover cost growth within a program, to protect funds intended for fundamental and applied research and analysis activities to the maximum extent practicable.

Sec. 304. Assessment of Science Mission Extensions

The assessments performed under this section may be provided as a single report. The conferees encourage NASA to include all missions within the Sun-Earth Connections division that have exceeded their planned mission lifetime as part of the assessment required in section 304(a)(1), not just the minimum mandatory set of missions identified in that paragraph.

Sec. 305. Microgravity Research

The conferees believe the United States needs to sustain a viable life and microgravity sciences research capability.

Sec. 316. Education

The conferees agree that NASA's education and public outreach programs can contribute to the availability of trained scientists,

technologists, engineers, and educators to support U.S. technical geospatial workforce needs in the 21st century.

Title IV. Aeronautics

Title IV outlines NASA's aeronautics research program. In recent years, this program has been recast several times. The authorization provided, in concert with the national aeronautics policy developed under section 101(c), should help NASA engage in an aeronautics program that is not radically reformed each fiscal year.

The conferees recognize that over the past several years technological and operational breakthroughs in Unmanned Aerial Vehicles (UAVs) have greatly advanced the capabilities and utility of this class of aircraft. The conferees further note that integrating long endurance UAVs into regulated U.S. airspace safely, seamlessly and securely, will be beneficial to our future in aviation, security, and commerce. The conferees urge NASA to share its data and policy recommendations from NASA's UAVs in the National Airspace System project to other relevant, federal agencies that ask for them. The conferees assume NASA will continue to fund this project in fiscal year 2006 and direct NASA to provide a report to the Committee on Science of the House of Representatives, and the Committee on Commerce, Science and Transportation of the Senate, not later than February 15, 2006, on the results and policy recommendations to date of the UAVs in the National Airspace System project.

The conferees consider NASA's aeronautics research and development capabilities to be an important national asset that, when appropriate, can be employed effectively to address challenges facing the nation in ensuring the security of the homeland. However, nothing in section 424 should be construed as requiring NASA to duplicate efforts underway at other agencies of the government. Rather, the conferees assume that any NASA activities in this area will be properly aligned with national requirements.

Sec. 503. Requirements

The conferees are concerned about the individuals and organizations who in good faith entered into contracts with NASA for Exploration Systems Research and Technology (ESR&T) and Human Systems Research and Technology (HSR&T) projects that NASA is now terminating in order to redirect funding to activities that it believes are of higher priority in its implementation of the new Exploration Systems Architecture. The conferees believe that NASA should work with the affected contractors to determine the extent to which the scope of the existing work plans might be altered to better comport with the goals of the new Exploration Systems Architecture, with emphasis on applications of enabling technologies to enhance exploration mission success. The conferees would urge NASA to notify affected contractors of the new Exploration Systems Architecture, and as part of the planned contract termination activities, provide them with a timetable and appropriate NASA technical assistance to determine whether an appropriate modification of their contract scope would enable them to conform to the new priorities resulting from the Exploration Systems Architecture.

Sec. 616. Museums

The conferees recognize the important role that informal science education can play in capturing the imagination of the young and inspiring future scientists, mathematicians and engineers. The conferees encourage NASA to continue to look for opportunities to help science museums improve their offerings, particularly their programs to educate students and to attract more students from under-represented groups into scientific fields. As with other education programs, NASA should ensure that it is evaluating the impact of any grants it provides to help museums reach more students through new exhibits or programs.

Sec. 618. Continuation of Certain Educational Programs

The National Space Grant College and Fellowship Program is a highly successful national network of colleges and universities that is supporting and enhancing science, technology, and mathematics education, research, and public outreach programs. The network includes over 850 affiliates in academia, business, museums and science centers, as well as state and local agencies. The Space Grant program provides scholarship and fellowship opportunities to students in every state, Puerto Rico, and the District of Columbia. Space Grant is an established and demonstrably effective national mechanism for attracting and retaining students in science, technology, and mathematics. The conferees strongly support its continuation at robust levels within NASA's education program.

The Experimental Program to Stimulate Competitive Research (EPSCoR) provides States of modest research infrastructure with funding to develop a more competitive research base within their State and member academic institutions. A total of seven Federal agencies conduct EPSCoR programs which build infrastructure and broaden the participation of states in the Federal research enterprise. The conferees strongly support its continuation at robust levels within NASA's education program.

Sec. 703. NASA Scholarships

Current law has two slightly different versions of law providing NASA with the authority to provide scholarships. Section 703 corrects this disparity.

ADDITIONAL CONCERNS

The conferees are aware of the issues surrounding NASA's use of its Mission Management aircraft. Therefore, the conferees request that NASA transmit a report to the authorizing committees by April 1, 2006, describing current policies concerning the use of NASA aircraft, the source of those policies, the extent of any adverse impact to the Agency and its ability to fulfill its mandates as prescribed in the Space Act, as amended, and any recommended changes to those policies that would assist NASA in carrying out its operations in fulfillment of those mandates.